

PAT-NO: JP358121001A
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TITLE: OPTICAL FIBER DEVICE

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INVENTOR-INFORMATION:

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ABSTRACT:

PURPOSE: To suppress a reflection factor of an optical fiber end face to a specified value or below, and to prevent generation of a noise, by sticking a transparent plate to the end face, utilizing the expansion of emitted light based on the number of openings of an optical fiber, and reducing a ratio in which a reflected ray is made re-incident to a core part.

CONSTITUTION: To the end face of an optical fiber 11, a glass plate 12 is fitted almost vertically in the axial direction of the optical fiber. An adhesive 13 fixes the optical fiber 11 and the glass plate 12 relatively, and also fills the space between the optical fiber end face and the glass plate surface. A core part of the optical fiber, the glass plate and the adhesive have an approximate refractive index, respectively. Since such a filling material exists, a reflection of light on interface between the optical fiber and the adhesive interface, or between the adhesive and the glass plate does not occur, and an interface 14 of the glass plate and air serves as an opening end of the optical fiber. In this regard, thickness of the glass plate is varied a little by the number of openings of the optical fiber, but it is about 1mm in case of a normal condition, and it becomes a value of 1mm□10mm depending on the condition.

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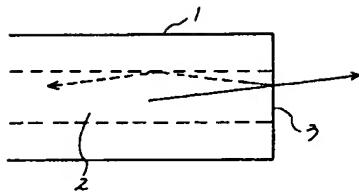
ズ発生などの不安定現象を生ずることがない。また、マルチモード、シングルモードのいずれの光ファイバに対しても効果を有する。

4. 図面の簡単な説明

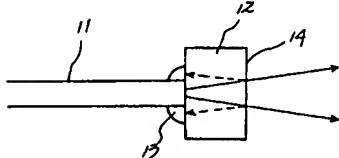
第1図は光ファイバ端面における光の反射を説明する図、第2図、第3図は本発明を示す図であって、1、11は光ファイバ、2はコア、3は光ファイバの端面、12はガラス板、13は接着剤、14はガラス板の表面、15は反射防止膜である。

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第 1 図



第 2 図



第 3 図

